



Water-Data Report 2008

01592500 PATUXENT RIVER NEAR LAUREL, MD

Upper Chesapeake Basin
Patuxent Subbasin

LOCATION.--Lat 39°06'56.6", long 76°52'25.5" referenced to North American Datum of 1983, Prince Georges County, MD, Hydrologic Unit 02060006, on right bank, 0.7 mi upstream from Walker Branch, 1.3 mi northwest of Laurel, and 81 mi upstream from mouth.

DRAINAGE AREA.--132 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WDR MD-DE-78-1: 1976(M). WDR MD-DE-89-1: 1978(M), 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 153.5 ft above National Geodetic Vertical Datum of 1929 (levels by Washington Suburban Sanitary Commission). Prior to Oct. 1, 1955, water-stage recorder and concrete control at site 0.3 mi downstream at different datum. Oct. 1, 1955 to Sept. 30, 1956, nonrecording gage at present site at datum 1.2 ft lower. Oct. 1, 1956 to Jan. 27, 1957, nonrecording gage at present site and datum. Jan. 28, 1957 to May 3, 1972, water-stage recorder and concrete control at present site and datum. May 4, 1972 to Sept. 4, 1973, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Records do not include diversion at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Flow regulated by Triadelphia Reservoir, and since March 1954 by T. Howard Duckett Reservoir, combined usable capacity, 11,800,000,000 gal; dead storage, 80,000,000 gal. U.S. Geological Survey gage-height telemeter at station. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 531 ft³/s, May 15, gage height, 6.70 ft; minimum discharge, 3.9 ft³/s, May 17, 18.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	20	21	21	21	22	23	22	23	23	22	22	21
2	20	21	21	21	22	23	22	23	23	22	22	21
3	20	21	21	21	22	23	22	23	23	22	22	21
4	20	20	21	21	22	23	22	23	67	22	21	21
5	20	20	21	21	22	23	22	23	172	22	21	21
6	20	20	21	21	22	23	22	23	88	22	21	21
7	20	20	22	21	22	23	22	23	88	22	21	21
8	20	20	21	21	22	23	22	23	88	22	21	21
9	20	20	21	21	22	23	22	23	85	22	21	21
10	20	20	21	21	22	23	22	23	88	22	21	21
11	20	20	21	21	25	23	22	23	42	22	21	21
12	20	20	21	21	26	23	23	186	23	22	21	21
13	20	20	21	21	23	23	22	370	23	22	21	21
14	20	20	20	21	22	23	22	371	23	22	21	21
15	20	21	20	21	22	22	22	388	23	22	21	22
16	20	21	20	22	22	22	22	200	23	22	21	21
17	20	21	20	22	23	22	22	120	23	22	21	20
18	20	21	20	22	22	22	22	19	23	22	21	20
19	20	20	20	22	23	22	22	21	23	22	21	20
20	20	21	20	21	23	22	22	22	23	22	21	20
21	20	20	20	22	23	22	22	22	23	22	21	20
22	20	21	20	21	23	22	22	22	23	22	21	23
23	20	21	20	22	23	22	22	22	23	22	21	20
24	21	21	20	21	23	22	22	22	24	22	21	24
25	21	21	20	21	23	22	22	22	23	22	21	30
26	21	21	21	21	23	22	23	23	22	22	21	30
27	21	21	21	21	23	23	23	23	22	22	21	31
28	21	21	21	21	23	22	23	23	22	22	21	31
29	20	21	21	21	23	22	23	24	22	22	21	31
30	20	21	21	21	---	22	23	23	22	22	21	31
31	21	---	21	21	---	22	---	23	---	22	21	---
Total	626	617	640	657	658	697	666	2,199	1,220	682	654	688
Mean	20.2	20.6	20.6	21.2	22.7	22.5	22.2	70.9	40.7	22.0	21.1	22.9
Max	21	21	22	22	26	23	23	388	172	22	22	31
Min	20	20	20	21	22	22	22	19	22	22	21	20
Cfsm	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.54	0.31	0.17	0.16	0.17
In.	0.18	0.17	0.18	0.19	0.19	0.20	0.19	0.62	0.34	0.19	0.18	0.19

Combined monthend contents, in millions of gallons, in Tridelphia Duckett Reservoirs (contents on Sept. 30, 2007, 5,840,000,000 gal.)

Records provided by Washington Suburban Sanitary Commission.

5550 5360 6170 6380 7440 8170 9400 10950 10410 9170 7460 6740

Diversions, in cubic feet per second, upstream from station at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Records provided by Washington Suburban Sanitary Commission.

19.6 24.2 9.06 30.5 68.6 78.7 88.4 93.7 94.8 94.2 93.5 86.5

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	45.7	49.8	78.2	98.0	114	135	137	107	92.3	59.6	48.0	64.0
Max	379	274	484	480	462	557	444	397	822	280	226	587
(WY)	(1980)	(2004)	(2004)	(1978)	(1979)	(1993)	(1952)	(1989)	(1972)	(1945)	(1971)	(1979)
Min	7.76	7.21	8.45	7.84	7.92	7.88	7.47	9.04	7.88	7.81	5.72	4.91
(WY)	(1968)	(1985)	(1966)	(1966)	(1966)	(1966)	(1966)	(1985)	(1967)	(1967)	(1966)	(1966)

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008			Water Years 1945 - 2008	
Annual total	20,572		10,004				
Annual mean		56.4		27.3		85.5	
Annual mean‡		117		92.8			
Lowest annual mean					9.09		1966
Highest daily mean	666	Apr 13	388	May 15	13,000	Jun 22,	1972
Lowest daily mean	20	Sep 11 ^a	19	May 18	1.1	Jun 26,	1956
Annual seven-day minimum	20	Sep 15	20	Oct 1	3.7	Aug 29,	1966
Maximum peak flow			531	May 15	b26,000	Jun 22,	1972
Maximum peak stage				6.70 May 15	c25.00	Jun 22,	1972
Instantaneous low flow				3.9 May 17 ^d	f0.05	Jul 18,	1985
Annual runoff (cfsm)	0.427		0.207		0.648		
Annual runoff (inches)	5.80		2.82		8.80		
10 percent exceeds	93		23		187		
50 percent exceeds	23		22		22		
90 percent exceeds	20		20		12		

‡ Adjusted for diversions.

^a Sept. 11, 13, 15-30, Oct. 1-23, 29, 30, Nov. 4-14, 19, 21, Dec. 14-25.

^b From rating curve extended above 6,600 ft³/s on basis of contracted-opening measurement of peak flow.

^c From floodmarks.

^d May 17, 18.

f Valve closed for repair.

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